Certificate of Analysis

Product Name: **Mitochondrial fusion promoter M1** **Catalog No.: 6898** **Batch No.: 1**

CAS Number: 219315-22-7

IUPAC Name: 4-Chloro-2-(1-(2-(2,4,6-trichlorophenyl)hydrazono)ethyl)phenol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{14}H_{10}Cl_4N_2O$

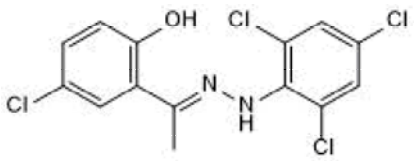
Batch Molecular Weight: 364.05

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	46.19	2.77	7.69
Found	46.16	2.72	7.7

Product Name: **Mitochondrial fusion promoter M1** **Catalog No.: 6898** **1**

CAS Number: 219315-22-7

IUPAC Name: 4-Chloro-2-(1-(2-(2,4,6-trichlorophenyl)hydrazono)ethyl)phenol

Description:

Mitochondrial fusion promoter M1 is a mitochondrial fusion promoter. Protects cells from mitochondrial fragmentation-associated cell death. Induces mitochondrial fusion in effector T cells imposing a memory T cell morphology. Improves cellular respiration and potentiates glucose-stimulated insulin-secretion in cholesterol-exposed pancreatic β cells. Mitochondrial fusion promoter M1 also enhances mitochondrial dynamics and transport velocity in axons of the sciatic nerve in vitro and enhances axon regeneration in the optic nerve in an in vivo model of nerve damage.

Physical and Chemical Properties:

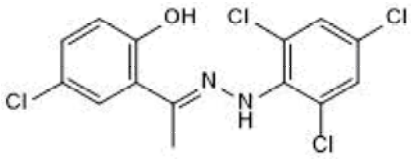
Batch Molecular Formula: $C_{14}H_{10}Cl_4N_2O$

Batch Molecular Weight: 364.05

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Au *et al* (2022) A small molecule M1 promotes optic nerve regeneration to restore target-specific neural activity and visual function. Proc.Natl.Acad.Sci.USA ***119*** e2121273119. PMID: 36306327.

Asalla *et al* (2016) Restoring mitochondrial function: a small molecule-mediated approach to enhance glucose stimulated insulin secretion in cholesterol accumulated pancreatic beta cells. Sci.Rep. ***10*** 27513. PMID: 27282931.

Buck *et al* (2016) Mitochondrial dynamics controls T cell fate through metabolic programming. Cell ***166*** 63. PMID: 27293185.